

AMENDMENTS TO THE CLAIMS

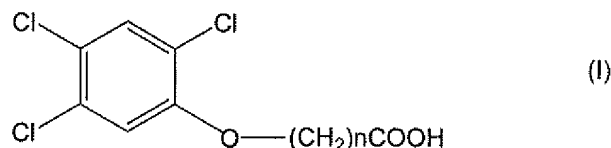
This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (canceled)

2. (previously presented) An immunoassay for determining an amount of dioxins in a sample comprising:

subjecting the sample and a competitive antigen for dioxins to a competitive reaction with an anti-dioxin antibody for a time and under conditions where two immunocomplexes are formed, wherein one immunocomplex is formed between dioxins in the sample and the anti-dioxin antibody and another immunocomplex is formed between the competitive antigen for dioxins and the anti-dioxin antibody, wherein the competitive antigen for dioxins is a 2,4,5-trichlorophenoxyalkyl carboxylic acid represented by the following formula (I):



where n is an integer of 1 to 10;

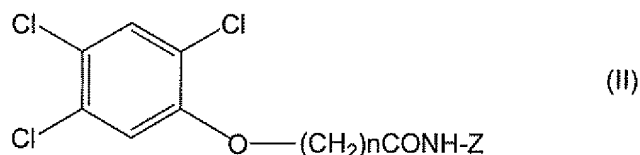
determining formation of the immunocomplex between the competitive antigen for dioxins and the anti-dioxin antibody by a competitive immunoassay procedure; and

calculating the amount of dioxins based on the formation of the immunocomplex between the competitive antigen for dioxins and the anti-dioxin antibody.

3. (canceled)

4. (previously presented) An immunoassay for determining an amount of dioxins in a sample comprising:

subjecting the sample and a 2,4,5-trichlorophenoxyalkyl amide derivative to a competitive reaction with an anti-dioxin antibody for a time and under conditions where two immunocomplexes are formed, wherein one immunocomplex is formed between dioxins in the sample and the anti-dioxin antibody and another immunocomplex is formed between the 2,4,5-trichlorophenoxyalkyl amide derivative and the anti-dioxin antibody, wherein the 2,4,5-trichlorophenoxyalkyl amide derivative is represented by the following formula (II):



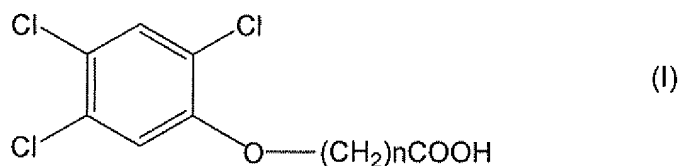
where n is an integer of 1 to 10, and Z is an amino acid or peptide;

determining formation of the immunocomplex between the 2,4,5-trichlorophenoxyalkyl amide derivative and the anti-dioxin antibody by a competitive immunoassay procedure; and

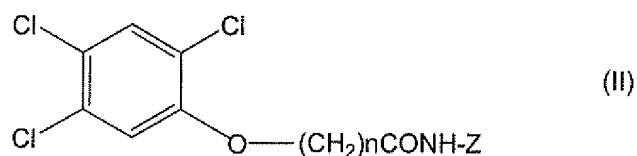
calculating the amount of dioxins based on the formation of the immunocomplex between the 2,4,5-trichlorophenoxyalkyl amide derivative and the anti-dioxin antibody.

5. (previously presented) An immunoassay kit for determining an amount of dioxins in a sample comprising:

a 2,4,5-trichlorophenoxyalkyl carboxylic acid represented by the following formula (I):



where n is an integer of 5 to 10, or a 2,4,5-trichlorophenoxyalkyl amide derivative represented by the following formula (II):



where n is an integer of 1 to 10, and Z is an amino acid or a peptide;

a primary antibody to dioxins; and

a labeled secondary antibody to the primary antibody;

wherein the 2,4,5-trichlorophenoxyalkyl carboxylic acid or 2,4,5-trichlorophenoxyalkyl amide derivative is used as a competitive antigen that reacts specifically with the anti-dioxin antibody and does not cross react with chlorobenzenes and chlorophenols.

6. (previously presented) The immunoassay kit according to claim 5, wherein the kit comprises 2,4,5-trichlorophenoxyalkyl amide derivative (II) which is immobilized to a solid phase.